

**ABSTRACT OF THE DISCLOSURE**

A telecommunications system has a protocol architecture over an interface between nodes of the telecommunications system, the protocol architecture including Internet Protocol as a protocol above a link layer protocol in a transport network layer. The protocol architecture can be used over one or more of several interfaces, including the interface between a radio access network and a core network [Iu Interface]; the interface between radio network controllers (RNCs) and the base stations (BSs) served thereby [Iub Interface]; and the interface between a Source RNC (SRNC) and a Drift RNC (DRNC) [Iur Interface]. A new XTP Protocol is proposed as another aspect of the invention, which is usable in a protocol stack for the Iu-PS (packet switched) implementation as well as over the Iu-CS, Iub, and Iur Interfaces..